LISTING OF THE CLAIMS

1. (Original) A dielectric barrier discharge lamp lighting device for driving a dielectric barrier discharge lamp having an inner electrode and an external electrode, comprising:

a transformer that includes a primary coil and a secondary coil, and supplies a driving voltage to the dielectric barrier discharge lamp from the secondary coil; and

a driving circuit that controls an input voltage to the transformer to supply the driving voltage with a driving frequency fd to the dielectric barrier discharge lamp,

wherein a self-resonant frequency fr of the secondary coil, which is measured with the primary coil of the transformer being open, is equal to the driving frequency fd or a frequency in the vicinity of the driving frequency fd.

2. (Original) The dielectric barrier discharge lamp lighting device according to claim 1, wherein the self-resonant frequency fr is set to satisfy $0.9fd \leq fr \leq 1.3fd$.

3. (Original) The dielectric barrier discharge lamp lighting device according to claim 1, wherein the self-resonant frequency fr is set to satisfy $0.95fd \leq fr \leq 1.25fd$.

4. (Original) The dielectric barrier discharge lamp lighting device according to claim 1, wherein the self-resonant frequency fr is set to satisfy $1.0fd \leq fr \leq 1.2fd$.

5. (Previously Presented) The dielectric barrier discharge lamp lighting device according to claim 1, wherein the driving voltage is a voltage having a substantially rectangular waveform.

6. (Previously Presented) The dielectric barrier discharge lamp lighting device according to claim 1, wherein the driving circuit includes a push-pull inverter.

7. (Previously Presented) The dielectric barrier discharge lamp lighting device according to claim 1, wherein the driving circuit includes a half-bridge inverter.